

REMARKS

After entry of this Amendment and Response, claims 2–11, 15, and 17–19 will be pending. Claims 2, 3, 4, and 11 are amended, and claim 1 is hereby cancelled. Support for the amendments may be found in, e.g., the originally filed claims. No new matter has been added.

Applicants note that, in the Office action mailed January 11, 2008, the Examiner apparently considered the originally filed claims, rather the claims as amended in the Preliminary Amendment filed June 1, 2006, to conform the nomenclature to proper claim drafting practice. The current claim listing and amendments take into account the claims as amended in the Preliminary Amendment.

Applicants note with appreciation that the Examiner has indicated that claims 2–3, 6–7, 9, 11–13, 15–16, and 18 would be allowable if rewritten in independent form. Accordingly, claims 2 and 11 have been rewritten in independent form.

Rejection of claims under 35 U.S.C. § 102

Claims 1, 4, 5, 8, 10, 14, and 17 are rejected under 35 U.S.C. § 102(b) as being obvious in view of U.S. Patent No. 6,936,923 to Lin et al. (“Lin”).

Lin addresses the creation of interconnect bumps. *See* Abstract. Lin appears to disclose a layer 36 of UBM that may include chrome, copper and gold. It may include a barrier layer of titanium. *See* column 7, lines 53–57 and column 9, line 41. The layer 36 of UBM may be disposed over a contact pad 32. *See* Figure 17 and column 6, lines 22–25.

Lin does not teach or suggest, however, a UBM layer including a middle layer comprising vanadium, as recited in previously amended independent claim 10. Moreover, Lin is utterly silent about the respective thicknesses of the layer 36 of UBM and the contact pad 32. Lin certainly does not teach or suggest a thickness of a top metallization layer that is substantially smaller than a thickness of the UBM layer, as recited in previously amended claim 10. In fact, in Figure 17 of Lin, contact pad 32 appears to be thicker than the layer 36 of UBM. Applicants submit that claim 10 is patentable for at least these reasons.

The rejection of claims 1 and 14 is moot in view of the cancellation of those claims. Claims 4, 5 and 8 now depend directly or indirectly on allowable claim 2, and are allowable for at least the same reasons claim 2 is allowable. Claim 17 depends on allowable claim 11, and is allowable for at least the reasons claim 11 is allowable.

CONCLUSION

In light of the foregoing, Applicants respectfully submit that all claims are now in condition for allowance.

Applicants believe that no fees are necessitated by the present paper. However, in the event that any additional fees are due, the Commissioner is hereby authorized to charge any such fees to Deposit Account No. 07-1700.

If the Examiner believes that a telephone conversation with Applicants' attorney would expedite allowance of this application, the Examiner is cordially invited to call the undersigned attorney at (617) 570-1806.

Respectfully submitted,

Date: March 28, 2008
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